

Interspecific variation of heavy metal concentrations in the different tissues of tropical intertidal gastropods from Malaysia.

ABSTRACT

The present study aims to determine the concentrations of Cd, Cu, Fe, Ni, Pb, and Zn in the different tissues of five species of tropical intertidal gastropods from Malaysia. Each of the species have organs/tissues that highly accumulated certain metals. For Cu, the mantles of *Cerithidea obtusa*, *Pugilina cochlidium*, and *Murex trapa*; and the digestive caeca of *Thais* sp. and *Chicoreus capucinus* highly accumulated Cu. The shells of *Chi. capucinus* and *M. trapa*, the digestive caeca of *P. cochlidium*, and the digestive glands of *Thais* sp. and *Chi. capucinus* highly accumulated Cd. The tentacles and the digestive caeca of *Cer. obtusa* and *P. cochlidium*, respectively, highly accumulated Zn, the digestive glands of *Thais* sp., *Chi. capucinus*, and *M. trapa* also highly accumulated Zn. The shells of most of the gastropods accumulated high levels of Pb and Ni. The opercula of most of the gastropods, besides the digestive glands for *Thais* sp., accumulated high levels of Fe. The present study on interspecific variations of heavy metals in gastropods provided information on differences of metal distributions in the different tissues, which could be useful in proposing potential tissues as better biomonitoring tools of heavy metal bioavailabilities in the coastal waters of Peninsular Malaysia.

Keyword: Gastropods; Heavy metals; Different tissues; Biomonitoring.